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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,494	03/31/2004	Jose A. Medina	K35R1861	8515
35219	7590	09/11/2006	EXAMINER	
WESTERN DIGITAL TECHNOLOGIES, INC.			RENNER, CRAIG A	
ATTN: SANDRA GENUA			ART UNIT	PAPER NUMBER
20511 LAKE FOREST DR.				
E-118G			2627	
LAKE FOREST, CA 92630			DATE MAILED: 09/11/2006	

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/815,494	MEDINA ET AL.	
	Examiner	Art Unit	
	Craig A. Renner	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 28 August 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-16 is/are pending in the application.
 - 4a) Of the above claim(s) 1-10 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 11-16 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 19 July 2004 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 19 July 2004.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of "Group II (Claims 11-16)" in the reply filed on 28 August 2006 is acknowledged. The traversal is on the ground(s) that "Applicants have amended Claim 1 to specify that the product made by the process of Claim 1 is the magnetic recording head recited in Claim 11, and Claim 11 also specifies that the magnetic recording head is made by the process of Claim 1. Accordingly, Claims 1 and 11 are not patentably distinct, and the restriction requirement is therefore unnecessary."

This argument, however, is not found persuasive because the product as claimed can still be made by another and materially different process, such as, a process not including "(c) adjusting the plating solution after step (b) to maintain the plating of the CoNiFe film having the composition and the saturation magnetic flux density; and (d) plating a second CoNiFe film", for instance. Additionally, note that even though the product claims call for "plating", the product as claimed can still be made by another and materially different process not including "plating" since "[d]etermination of patentability in 'product-by-process' claims is based on product itself, even though such claims are limited and defined by process [i.e., "plating", for instance], and thus product in such claim is unpatentable if it is the same as, or obvious form, product of prior art, even if prior product was made by a different process", *In re Thorpe, et al.*, 227 USPQ 964 (CAFC 1985). Furthermore, a "[p]roduct-by-process claim, although reciting subject matter of claim in terms of how it is made [i.e., "plating", for instance], is still product

claim; it is patentability of product claimed and not recited process steps that must be established, in spite of fact that claim may recite only process limitations", *In re Hirao and Sato*, 190 USPQ 685 (CCPA 1976).

The requirement is still deemed proper and is therefore made FINAL.

Accordingly, claims 1-10 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to one or more non-elected inventions/species, there being no allowable generic or linking claim.

Drawings

2. The drawings were received on 19 July 2004. These drawings are accepted.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

4. The disclosure is objected to because of the following informality:

In line 7 of the abstract, one of the duplicated "hydroxymethyl-p-tolylsulfone" should be deleted for clarity. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In line 2 of claim 16 "the low perpendicular anisotropy field" is indefinite because it lacks clear and/or positive antecedent basis.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawasaki et al. (US 2002/0155321).

Kawasaki teaches a magnetic recording head comprising a first pole (16/19); a second pole (21/22); a write coil (24) residing between the first pole and the second pole (as shown in FIG. 2, for instance); a write gap (20) residing between a portion (19) of the first pole and a portion (21) of the second pole; wherein at least a portion (19) and/or (21) of the first pole and/or the second pole includes a CoNiFe film having a high saturation magnetic flux density and having a composition of 50-70 weight percent of Fe and 3-8 weight percent of Ni (paragraph [0086], for instance) [as per claim 11]; wherein the CoNiFe film has the high saturation magnetic flux density of greater than 2.2 Tesla

and a composition of 58-62 weight percent of Fe and 3.5-4 weight percent of Ni (paragraphs [0093]-[0094], for instance) [as per claim 12]; and wherein the CoNiFe film is a soft magnetic film (lines 5-6 in paragraph [0094], for instance) [as per claim 13]. As the claims are directed to a “magnetic recording head”, *per se*, the method limitation(s) appearing in lines 7-9 of claim 11 can only be accorded weight to the extent that it/they affect the structure of the completed magnetic recording head. Note that

“[d]etermination of patentability in ‘product-by-process’ claims is based on product itself, even though such claims are limited and defined by process [i.e., “plated using a plating solution including hydroxymethyl-p-tolylsulfone, the plating solution being configured”, for instance], and thus product in such claim is unpatentable if it is the same as, or obvious form, product of prior art, even if prior product was made by a different process”, *In re Thorpe, et al.*, 227 USPQ 964 (CAFC 1985). Furthermore, note that a “[p]roduct-by-process claim, although reciting subject matter of claim in terms of how it is made [i.e., “plated using a plating solution including hydroxymethyl-p-tolylsulfone, the plating solution being configured”, for instance], is still product claim; it is patentability of product claimed and not recited process steps that must be established, in spite of fact that claim may recite only process limitations”, *In re Hirao and Sato*, 190 USPQ 685 (CCPA 1976).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawasaki et al. (US 2002/0155321).

Kawasaki teaches the magnetic recording head as set forth in paragraph 8, supra. Kawasaki, however, remains silent as to the CoNiFe film hard axis coercivity being "less than or equal to two Oe" and the CoNiFe film easy axis coercivity being "less than or equal to six Oe" as per claim 14, the CoNiFe film low perpendicular anisotropy field being "less than thirty five Oe" as per claim 15 and "less than twenty Oe" as per claim 16. Official notice is taken of the fact that it is notoriously old and well known in the magnetic recording head art to modify the parameters of magnetic recording head components during the course of routine optimization/experimentation. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have had the CoNiFe film hard axis coercivity of Kawasaki be less than or equal to two Oe, the CoNiFe film easy axis coercivity of Kawasaki be less than or equal

to six Oe, and the CoNiFe film low perpendicular anisotropy field of Kawasaki be less than thirty five Oe and less than twenty Oe. The rationale is as follows:

One of ordinary skill in the art would have been motivated to have had the CoNiFe film hard axis coercivity of Kawasaki be less than or equal to two Oe, the CoNiFe film easy axis coercivity of Kawasaki be less than or equal to six Oe, and the CoNiFe film low perpendicular anisotropy field of Kawasaki be less than thirty five Oe and less than twenty Oe since such ranges, absent any criticality (i.e., unobvious and/or unexpected result(s)), are generally achievable through routine optimization/experimentation, and since discovering the optimum or workable ranges, where the general conditions of a claim are disclosed in the prior art, involves only routine skill in the art, *In re Aller*, 105 USPQ 233 (CCPA 1955). Moreover, in the absence of any criticality (i.e., unobvious and/or unexpected result(s)), the parameters set forth above would have been obvious to a person having ordinary skill in the art at the time the invention was made, *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

Pertinent Prior Art

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. This includes Yoshikawa et al. (US 6,132,892), which teaches a magnetic recording head (29) comprising a first pole (27); a second pole (31); a write coil (32) residing between the first pole and the second pole; a write gap (30) residing between a portion of the first pole and a portion of the second pole; wherein at least a

portion of the first pole and/or the second pole includes a CoNiFe film having a high saturation magnetic flux density and having a composition of 50-70 at % of Fe and 3-8 at % of Ni (line 66 in column 21, for instance); and Koshiba et al. (US 6,183,899), which teaches a magnetic recording head (60) comprising a first pole (65); a second pole (78); a write coil (76) residing between the first pole and the second pole; a write gap (74) residing between a portion of the first pole and a portion of the second pole; wherein at least a portion of the first pole and/or the second pole includes a CoNiFe alloy film having a high saturation magnetic flux density and having a composition of 50-70 atomic percent of Fe and 3-8 atomic percent of Ni (lines 11-30 in column 10, for instance).

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig A. Renner whose telephone number is (571) 272-7580. The examiner can normally be reached on Monday-Tuesday & Thursday-Friday 9:00 AM - 7:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Craig A. Renner
Primary Examiner
Art Unit 2627

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